University of California
College of Agriculture
Agricultural Experiment Station
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AGRICULTURAL LABOR REQUIREMENTS AND SUPPLY

KERN COUNTY

By

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Introduction

During the past four years the College of Agriculture has done considerable work in determining California's need for seasonal agricultural workers. In 1936 and 1937 extensive data were collected pertinent to each agricultural county of the state. Subsequently these data were summarized and published. 3/ Kern County was naturally included, since this is an important agricultural county. Publication of the findings created so much interest in this county that a request was made for a second, more exhaustive study which should deal with total need for agricultural labor in this county, and, further, show the sources from which this labor is drawn. 4/ This paper sets forth the results of such a study by means of text, charts, and graphs. All labor required in the production of the 20 major crops grown in Kern County, sources of supply, and certain other pertinent findings are here presented.

Though this paper deals exclusively with findings for a single county, in addition it constitutes an exploratory study that may serve as a basis for other studies in localities having need of data concerning total needs of agricultural labor and sources of supply.

Procedure.-- As a result of meetings between college representatives with interested farmers in Bakersfield, 5/ crops to be studied were selected and method of collecting data agreed upon. This method consisted of preparing for each of the 20 crops, comprising 97 per cent of the producing area of the county, statistics of total acreage, range and modal size of acreage per farm, calendar of operations depicting required operations, time of year when these are performed, and amount of labor required by each operation, usual equipment utilized for each operation, days work or amount of man-days for each operation with due consideration of equipment, nature of labor usually employed (operator's, family labor, regularly employed year round or nearly year round workers, and seasonal workers) including both farm and shed labor, and source of seasonal workers (whether resident locally or migrants from other localities).

In November, 1939, Mr. J. M. Bremner, a fieldman for the College of Agriculture, was assigned to collect the basic data required in a study of this kind. Mr. Bremner spent several weeks in the county collecting material from individual farmers and from groups of growers assembled for the purpose of supplying information and assessing data already collected. Thus, this phase of the study is based solely on farmers' information and contributions.

1/ As of March 1, 1940.

2/ Professor of Farm Management, Agricultural Economist in the Experiment Station. and Agricultural Economist on the Giannini Foundation.

3/ Adams, R. L. Seasonal labor requirements for California crops. California Agr. Exp. Sta. Bul. 623. July, 1938.

4/ Letter to Dean C. B. Hutchison, June 20, 1939, sent by the Labor and Farm Management Committee of the 1939 (Kern County) Agricultural Economic Conference.

5/ These meetings were arranged by and held under the auspices of Farm Advisor Marc A. Lindsay and the Labor and Farm Management Committee of the 1939 Agricultural Economic Conference.

Following collection of data in the field, the findings were assembled and summarized, finally resulting in the text and charts which follow. In assembling, the labor requirement of each crop was first determined, and from these data was then calculated the total agricultural labor load of the county.

Data concerning the available supply of workers and the sources from which workers are drawn were collected from the State Relief Administration, Works Progress Administration, Farm Security Administration, Kern County Health Department, State of California Employment Bureau, Kern County Board of Education, labor camps, labor contractors, and from growers.

Definitions

Regularly employed workers is a term indicating labor contributed by farm operators, members of their families, and hired workers employed upon a monthly basis and frequently year round.

Seasonal labor comprises temporarily employed workers hired for short periods. These periods may be as short as a week or ten days (in connection with quickly maturing fruits and vegetables) or as long as five months (cotton picking).

Local resident workers, a term used in connection with seasonal help, are workers resident in Kern County at the time of employment.

Transient workers are workers who "follow the crops," moving into Kern County when work is available, and leaving when the work is done. These workers may or may not maintain residence elsewhere than in Kern County.

Man-day, a measure of labor needs in terms of the amount of work that a competent worker performs in a nine-hour day, is an abbreviation for man-work-day.

Brief Account of Kern County Agriculture

Agriculture in Kern County during 1939 was conducted on 284,008 acres of crop land. 6/ This acreage is primarily utilized by 4,127 acres of deciduous tree fruits (apples, apricots, cherries, figs, nectarines, olives, peaches, pears, persimmons, plums, pomegranates, quinces, almonds, pecans, walnuts, and family orchards); 60 acres of berries; 1,489 acres of citrus fruits (mostly oranges); 17,864 acres of vineyards (mostly table grape varieties); 1,402 acres of melons; 28,504 acres of potatoes; 1,312 acres of lettuce; 900 acres of onions; 785 acres of peas; 414 acres of sweet corn; 446 acres of other vegetables (sweet potatoes, cabbage, tomatoes, cucumbers, squash, beans, carrots, and miscellaneous); 67,043 acres of cotton; 40,000 acres of alfalfa; 1,000 acres of silage; 2,562 acres of sugar beets; and 116,140 acres of grain (barley, milo, wheat, grain hay, flax, oats, and rye).

Acreages and production of the principal crops grown in Kern County during 1939 are set forth in table 1. These data provide a basis for figuring man-labor requirements.

6/ 1939 annual report (processed), Crop Acreage, Production and Value, Kern County. Lewis A. Burtch, Agricultural Commissioner for Kern County.

TABLE 1

Acreages and Production of Principal Crops, Kern County, 1939

Crop	Acreage (acres)	Yield 7/
Alfalfa hay	36,000	234,000 tons 8/
Apricots	504	200 tons (fresh fruit basis)
Barley	28,400	610,000 sacks of 100 pounds net
Cantaloupes	362	90,500 crates
Cotton	67,043	*116,700 bales of 478 pounds net
Grapes (table varieties)	28,504	*67,424 tons (plus about 6,000 tons of raisins)
Grapes (wine varieties)	1,702	*16,114 tons
Lettuce	1,312	*296,149 crates
Milo	12,600	12,600 tons
Olives	420	900 tons
Onions	900	*164,589 sacks of 50 pounds net
Oranges	1,365	361,000 field boxes
Peas (bush varieties)	450	33,750 bushel hampers of 32 pounds net
Peas (pole varieties)	335	31,150 crates
Plums	1,664	9,000 tons
Potatoes	28,504	*5,322,583 sacks
Sugar beets	2,562	*26,502 tons
Sweet potatoes	284	*104,399 lugs
Watermelons	980	*7,270 tons
Wheat	68,860	*30,119 tons

Kern County agriculture is definitely diversified when the county as a whole is considered. However, individual farms tend to specialize, and the prevailing custom is for each farm to concentrate on a very few kinds of crops, such as cotton and alfalfa, citrus, vineyards, deciduous tree fruits, potatoes and onions, etc., though there is evidence of an increasing trend in the direction of increased diversification on the individual farms. This trend is partly to insure a more stable farm income, possibly some influence from the Agricultural Adjustment Administration programs, but also to bring about greater stability in the use of hired farm workers.

So diversified are the crops of Kern County that much agricultural employment must necessarily be of a seasonal nature. During earlier years workers appeared on the scene when work was to be had, and departed immediately after the work was done. In those days farm operators were supplied by a typical group of migrant workers who

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7/ Based on grower estimates of production per acre except items starred. The latter are data from the 1939 annual report of the Agricultural Commissioner. (See note 6/ above).

8/ 30,000 acres cut for hay 7 times at average of 8 tons of hay per acre for season; 6,000 acres cut 3 times at average of 4 tons of hay per acre for season. Ignores pasturage.

moved in with the crops and moved out following completion of the harvests. During the last three or four years the strictly migrant group has been replaced to a considerable extent by families coming to California from other states. Many hundreds, possibly thousands, of these families, have reached California via Bakersfield, and a not inconsiderable number settled in Kern County. 9/

While the data comprising this report are confined to Kern County, yet so much variation occurs in soils, climatic conditions, and in cultural practices between different localities of the county and different farms in the same locality that the findings necessarily are averages for the area. Adjustments are needed if application is to be made to a locality within the county or to a given farm.

Acreage Changes and Fluctuations, Kern County Crops.-- Statistics of crop acreages in Kern County reflect some rather interesting changes over the five year period, 1935-1939. 10/ Deciduous fruit orchards show a reduction from 6,044 acres in 1935 to 4,187 acres in 1939. In this crop group and for this period especially heavy reductions were recorded in apples (from 575 to 67 acres); apricots (from 939 to 504 acres); figs (from 123 to 21 acres); peaches (from 1,018 to 787 acres); pears (from 600 to 179 acres); and prunes (from 195 to 0 acres). Other fruits showed minor reductions except almonds. Almonds, a minor crop, showed an increase (from 68 to 88 acres). Citrus growers showed a very slight acreage increase (from 1,463 to 1,489 acres). Vineyard acreages rose from 17,056 to 17,864 acres.

Outstanding changes in acreages of field crops include cotton (which rose from 47,800 to 67,043 acres); alfalfa (from 30,000 to 40,000 acres); sugar beets (from 0 to 2,562 acres). Small grain crops rose from 64,957 to 116,140 acres, substantial increases being recorded for barley, wheat, and flax.

Of the important truck crops, from the standpoint of acreage, potatoes rose from 10,000 to 28,504 acres; lettuce from 240 to 1,312 acres; and peas from 112 to 785 acres. Melon acreage remained fairly stationary at about 1,400 acres, while onions dropped from 1,363 to 900 acres.

Some crops, important because of size of acreage and need for labor, fluctuated in acreage and production from year to year. During the 5-year period, 1935-1939, melon acreage varied from 761 to 1,402 acres; potatoes from 10,000 to 28,504 acres; onions from 820 to 1,638 acres; peas from 112 to 785 acres; lettuce from 150 to 1,312 acres; and cotton from 47,800 to 122,000 acres.

Thus data accumulated for any single year must be adjusted if application to other years is attempted.

9/ That the growth in population in Kern County has been considerable is shown by estimates made by the Kern County Health Department. This Department estimates that the population was increased from 1933 to 1940 by 48,000, or about 56 per cent. Some of this growth is attributable to a high birth rate in the county, but this one factor is said to be responsible for only a small percentage of the total increase. For the period July 1, 1938 to June 30, 1939 the gain was 1,760. The increase in registered voters in 1939 was 2,558 more than in 1938.

10/ Data from Annual Reports prepared by Kern County Agricultural Commissioner, Lewis A. Burtch

Labor Requirements in 1939, Kern County

This section of our study sets forth the total need for labor (a) by specific crops, and (b) by months. In these tabulations all labor is reported, irrespective of whether the work be performed by regular help or seasonal workers. The calculations are based on necessary operations, expenditure of labor per operation (expressed in man-days), and the calendar month when the work is performed. Table 2 shows labor requirements by crops for 20 important crops grown in Kern County (already listed in table 1 above). The data were calculated from the 1939 acreage in each crop and its resulting production.

TABLE 2

Total Labor Requirements by Crops, Kern County, 1939

Crop	Total requirements (man-days)
Alfalfa	194,942 11/
Apricots	6,030
Barley	13,750
Cantaloupes	7,428
Cotton	480,611
Grapes (table varieties)	424,601
Grapes (wine varieties)	17,152
Lettuce	40,421
Milo	11,805
Olives	8,769
Onions	18,302
Oranges	27,698
Peas (bush varieties)	4,513
Peas (pole varieties)	17,075
Plums	49,473
Potatoes	268,588
Sugar beets	19,788
Sweet potatoes	4,366
Watermelons	9,097
Wheat	18,374
	1,642,783

11/ Figured on basis of 30,000 acres cut 7 times; 6000 acres cut 3 times (and then pastured); irrigating 16,000 acres utilized for pasture; 10,000 acres new seeding each year.

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These data are presented by calendar months in table 3 and figure 1. Table 3 thus shows the varying need for labor by months, a need that in 1939 varied from 50,920 man-days in February to 252,896 man-days in Octoboer, Generally speaking, Kern County agriculture, as represented by these 20 crops in 1939, had need for more than 125,000 man-days each month May to December, inclusive, and for less than 100,000 man-days January to April, inclusive.

TABLE 3

Total Labor Requirements, 20 Crops, Kern County, 1939

Month	Total man-days	Percentage of total
January	72,018	4.4
February	45,970	2.8
March	69,518	4.2
April	108,151	6.6
May	147,521	8.9
June	188,887	11.5
July	150,639	9.2
August	163,562	9.9
September	157,001	9.6
October	260,842	15.9
November	149,175	9.1
December	129,499	7.9
	1,642,783	100.0

[illegible] relatively nonfarm in nature [illegible] 1,000 man-days per month, a mean that is [illegible] 1,270 man-days in July [illegible] 2,292,292 man-days in October, [illegible] as [illegible] In monthly variations, as represented by those 20 crops in Table [illegible] there are 18,000 man-days each month May to December, inclusive, and the lows than 100,000 man-days January to April, inclusive.

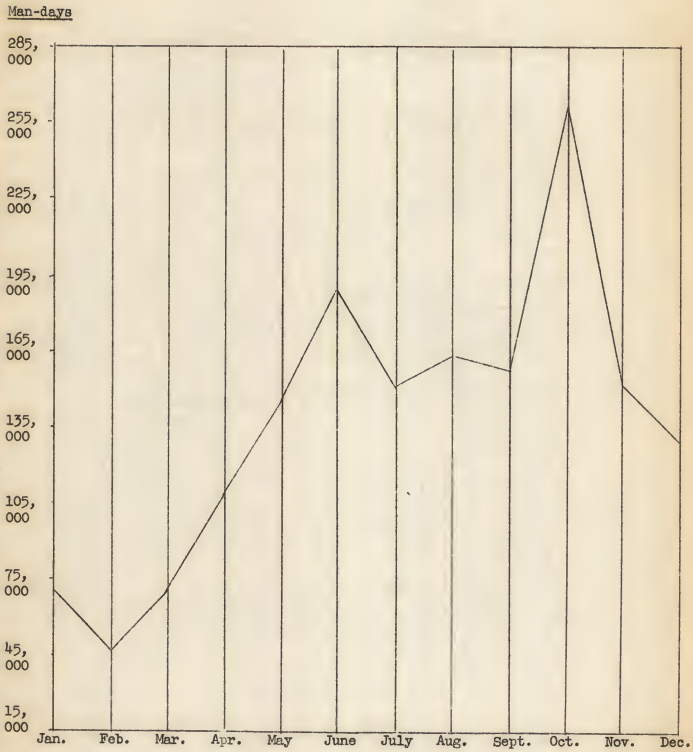
TABLE 3

Total Labor Requirements, 20 Crops, Kern County, 1959

Month	Total man-days	Percentage of total
January	72,912	1.4
February	73,270	2.3
March	89,318	3.2
April	105,121	5.0
May	147,321	8.9
June	178,287	11.3
July	150,039	9.8
August	165,252	9.9
September	137,001	7.6
October	250,382	13.9
November	145,177	9.1
December	129,429	7.9
	1,645,785	100.0

Figure 1.

Total Agricultural Labor Needs: Kern County: 1939



Reliance Upon Regular and Seasonal Workers

Both regular and seasonal workers are required to grow, harvest, and prepare for market the crops of Kern County. The proportion of total work performed by these two groups was determined from data supplied by informed Kern County farmers. The findings indicate that regularly employed workers account for about half of the required man-days of labor, while the other half is labor performed by seasonal workers. Table 4 gives the data by crops in terms of man-days.

TABLE 4

Total Farm Labor Requirements Segregated into Man-Days of Permanent and Seasonal Workers, by Crops, Kern County, 1939

Crop	Total Requirements (Man-Days)	Use of Permanent Workers (Man-Days)	Use of Seasonal Workers (Man-Days)
Alfalfa	194,942	194,942	0
Apricots	6,030	4,758	1,272
Barley	13,750	9,997	3,753
Cantaloupes	7,428	4,261	3,167
Cotton	480,611	182,726	297,885
Grapes (table varieties)	424,601	175,686	248,915
Grapes (wine varieties)	17,152	5,324	11,828
Lettuce	40,421	7,010	33,411
Milo	11,805	11,805	0
Olives	8,769	1,629	7,140
Onions	18,302	3,452	14,850
Oranges	27,698	7,462	20,236
Peas (bush varieties)	4,513	365	4,148
Peas (pole varieties)	17,075	3,244	13,831
Plums	49,473	29,326	20,147
Potatoes	268,588	169,016	99,572
Sugarbeets	19,788	3,135	16,653
Sweet potatoes	4,366	1,725	2,641
Watermelons	9,097	4,812	4,285
Wheat	18,374	13,416	4,958
Total	1,642,783	834,091	808,692
No. percentages	100	50.8	49.2

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Table 5 (and figure 2) indicate monthly labor requirements segregated into regular and seasonal workers.

TABLE 5

Total Man-Days of Labor Requirements, by Months, Segregated into Regular and Seasonal Workers, by Months, 20 Crops, Kern County, 1939

Month	Total Man-days	Man-Days, Regular Workers	Man-Days, Seasonal Workers
January	72,018	35,908	36,110
February	45,970	27,378	18,592
March	69,518	37,770	31,748
April	108,151	69,510	38,641
May	147,521	74,095	73,426
June	188,887	103,837	85,050
July	150,639	104,255	46,384
August	163,562	99,879	63,683
September	157,001	93,826	63,175
October	260,842	105,230	155,612
November	149,175	40,529	108,646
December	129,499	41,874	87,625
Total	1,642,783	834,091	808,692

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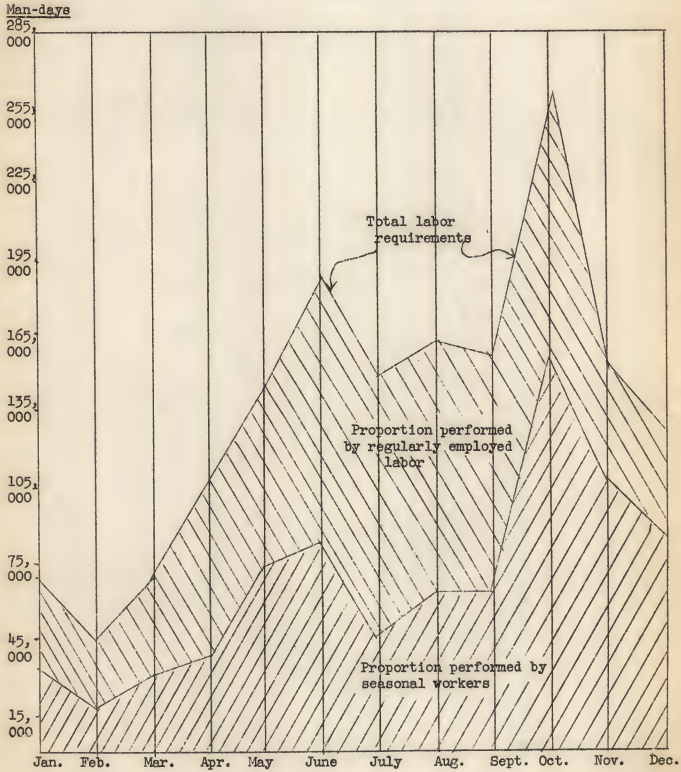
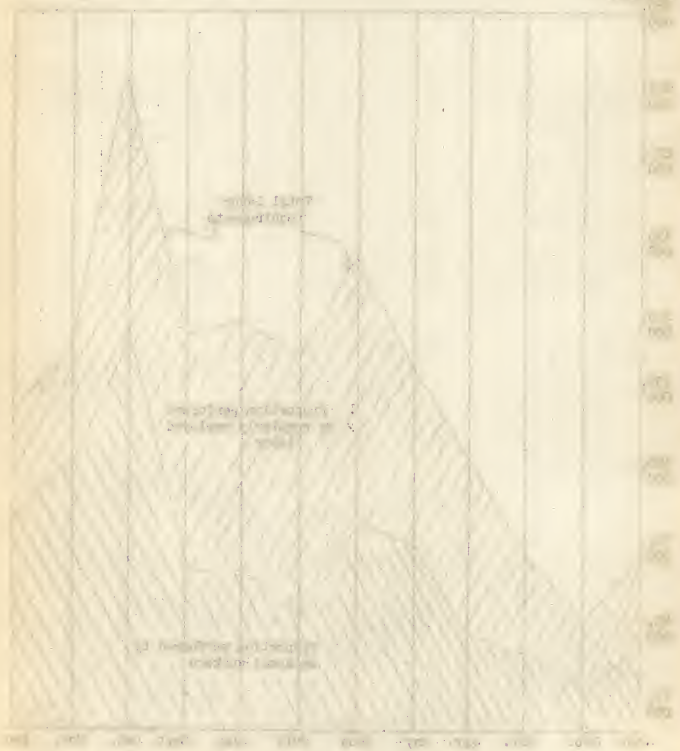
Figure 2.

Proportion of Agricultural Units Performed by (a) Regularly Employed, and (b) Seasonal Workers: Kern County: 1939





The nature of tasks performed by seasonal workers, the crops involved, the percentage of work done by seasonal labor, and the months when each task is performed, are indicated by table 6.

TABLE 6

Tasks Performed by Seasonal Workers - 20 Crops - Kern County, 1939

Crop	Tasks Performed by Seasonal Workers		
	Nature	Per Cent	Month
Alfalfa	None		
Apricots	Pruning	50	Dec., Jan., Feb.,
	Spraying	90	" " "
	Thinning	90	Apr., May
	Picking	75	June, July
Barley	Harvesting	25	June, July
	Hauling	75	" "
Cantaloupes	Planting	40	Feb., Mar.
	Capping	40	" "
	Thinning, and removing caps	50	Apr.
	Hoeing	50	Apr., May
	Picking	100	)
	Hauling	100	) June, July
	Packing	90	)
Cotton	Chopping	75	Apr., May, June
	Hoeing	50	May, June
	Picking	80	Sept.- Jan. (inclusive)
Grapes (table varieties)	Pruning and tying	40	Dec., Jan., Feb.
	Sulphuring and other pest control	50	Mar.- June (inclusive)
	Suckering, thinning, girdling	50	May - June
	Picking	50	)
	Field packing	50	) July - Oct. (inclusive)
	Shed packing	20	)
Grapes (wine varieties	Pruning	40	Dec., Jan., Feb.,
	Pest control	50	Mar. - June (inclusive)
	Picking	75	Aug. - Nov. (")
Lettuce	Pest control (birds)	50	Sept. - Jan. (inclusive)
	Hoeing	50	Feb. and Oct.
	Harvesting	100	) Mar. - Apr. and
	Hauling	100	) Nov. - Dec.
	Packing	90	)
Milo	None		
Olives	Pruning	50	Feb. - Mar.
	Picking	100	Oct. - Nov.

[illegible] Table 1 [illegible] Table 2 [illegible] Table 3 [illegible] Table 4 [illegible] Table 5 [illegible] Table 6 [illegible] Table 7 [illegible] Table 8 [illegible] Table 9 [illegible] Table 10 [illegible] Table 11 [illegible] Table 12 [illegible] Table 13 [illegible] Table

TABLE 6 (Continued)

Crop	Nature	Per Cent	Months
Onions	Planting	100	Nov. - Dec.
	Weeding	100	Jan. - Apr. (inclusive)
	Harvesting	100	Apr. - June (")
Oranges	Pruning	50	Dec., Jan., Feb.
	Pest control	100	Mar. - May (inclusive)
	Orchard heating	50	Nov. - Feb. (inclusive)
	Picking	100	)
	Hauling	100	) Nov. - Dec.
	Packing	80	)
Peas (bush varieties)	Weeding	100	)
	Dusting	100	) Aug. - Sept.
	Picking	75	(
	Hauling	100	(Oct., Nov., Dec.
Peas (pole varieites)	Staking	100	Aug.
	Stringing	85	Aug. - Nov. (inclusive)
	Picking	95	)
	Hauling	100	) Oct., Nov., Dec.
	Shed work	25	)
	Clearing off vines and strings	100	Jan., Feb.
Plums	Pruning	15	Dec. - Jan.
	Spraying	20	" "
	Thinning	50	April
	Picking	50	) June, July
	Packing	50	)
Potatoes	Cutting seed	50	Nov., Dec., Jan.
	Picking up	80	) Mar. - July (inclusive)
	Hauling	25	) and
	Shed work	10	) Sept. - Nov. "
Sugarbeets	Thinning	100	Mar., Apr., May
	Hoeing	100	June, July
	Pulling, topping, and loading	100	) Aug., Sept., Oct.
	Hauling	100	)
Sweetpotatoes	Planting	40	Mar., Apr.
	Harvesting	75	July, Dec. (inclusive)
Watermelons	Capping	100	Feb., Mar.
	Thinning	50	April
	Hoeing	50	Apr., May
	Picking and loading	100	June, July
	Hauling	100	" "
Wheat	Harvesting	40	) June, July, Aug.
	Hauling	100	)

Item	Source	Page	Notes
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Breakdown of Seasonal Labor Employment

As indicated above, about one-half of the farm labor requirements of Kern County during 1939 were supplied by seasonal workers. In terms of man-days, seasonal workers contributed 808,692 man-days out of requirements totaling 1,642,783 man-days.

An inquiry was made to determine the source of seasonal workers, whether transient or locally resident. According to the best available estimates, 266,181 man-days, or 32.9 per cent of seasonal workers were classed as transient help, with 542,511 man-days, or 67.1 per cent of seasonal workers locally resident in Kern County.

The figures resulting from this inquiry are given in table 7 and figure 3.

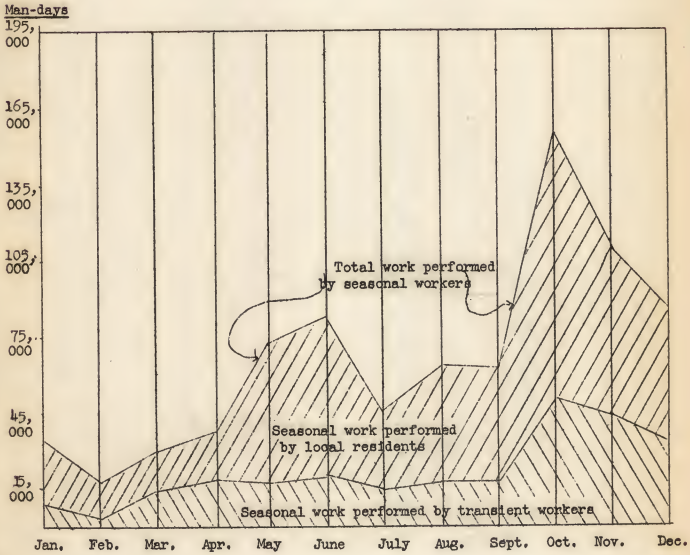
TABLE 7

Man-Days of Seasonal Labor Contributed by (a) Regular Employed Workers, (b) Transient and (c) Locally Resident Workers - Kern County, 1939

Month	Total Man-Days of Seasonal Employment	Man-Days of Seasonal Work Performed by	
		Transients	Local Residents
January	36,110	9,751	26,359
February	18,592	4,351	14,241
March	31,748	13,962	17,786
April	38,641	18,824	19,817
May	73,426	17,674	55,752
June	85,050	21,698	63,352
July	46,384	13,924	32,460
August	63,683	17,584	46,099
September	63,175	19,236	43,939
October	155,612	55,631	99,981
November	108,646	41,704	66,492
December	87,625	31,842	55,783
Totals	808,692	266,181	542,511
No. Percentages	100.0%	32.9%	67.1%

Figure 3.

Seasonal Work Performed by (a) Local Residents, and (b) Transient Workers: Kern County: 1939



Number of Workers Required for Seasonal Tasks. Data of required labor appear above as man-days. To indicate the need in terms of number of workers, an attempt was made to translate man-days into numbers. This transition is difficult because of various influences including, difference in time limits within which tasks must be performed, distance between jobs, variation in tasks, weather conditions, and lack of versatility of workers (thus limiting their work to crops or tasks with which they are familiar, have had experience, or within their various capacities). A few farm tasks call for little in the way of experience, or are such that they can be performed by women and children. But most farm tasks call for experience, strength, stamina, and knowledge of local conditions. For purposes of illustration, table 8 is an attempt to set forth in figures Kern County's agricultural need for seasonal workers during 1939, with a "breakdown" to local residents and transients. The figures are minima, since they are based on a full day's work by an efficient and mature worker. Use of the less efficient male workers or employing of women or children would obviously increase the actual number which would be required.

TABLE 8

Required Minimum Number of Seasonal Workers (Round Numbers)
Kern County, 1939

Month	Number Resident	Number Transient	Total
January	1300	500	1800
February	650	200	850
March	750	600	1350
April	800	750	1550
May	2100	700	2800
June	2400	850	3250
July	1250	550	1800
August	1750	700	2450
September	1700	750	2450
October	4000	2250	6250
November	3000	1700	4700
December	2750	1400	4100

Effect of Changing Crops.-- Changes in Kern County's cropping program are bound to affect agricultural employment. The extent that a substantial increase or reduction in any of the present 20 crops comprising Kern County's agriculture will affect both the need for workers and employment opportunities is shown by the figures comprising Table 9. The data are shown by crops, months, and totals per unit of crops (viz. 100 or 1,000 acres), and the average per acre. Thus if the alfalfa acreage is decreased by 1,000 acres and sugar beets increased by 1,000 acres the effect upon labor requirements and opportunities will be about as follows:

Man-days of labor required for 1,000 acres of sugar beets	7728.8
Man-days of labor required for 1,000 acres of alfalfa	4753.0
Net increase in labor needs and opportunity (man-days)	2975.8

Table 9 may serve a useful purpose in determining (a) the effect of substantial changes in crop acreages, and (b) as a means of future estimating of labor requirements in accordance with such changes.

TABLE 9.

Total Labor Requirements by Crops, Kern County, 1939 (in Man-Days)

Month	Alfalfa hay (7 cuttings 8 tons)	Apricots	Barley	Cantaloupes	Cotton	Grapes (table)	Grapes (wine)
	1000 acres	100 acres	1000 acres	100 acres	1000 acres	1000 acres	1000 acres
January	0	142.0	36.0	0	249.3	1462.3	165.6
February	0	71.6	36.2	53.1	116.2	1462.3	118.2
March	0	25.0	0	121.3	253.6	531.7	490.3
April	650.0	37.5	20.8	260.8	93.3	208.3	143.3
May	679.0	32.5	20.8	327.4	363.2	1633.1	201.6
June	679.0	358.3	121.4	302.6	417.8	1633.1	209.9
July	679.0	338.3	121.4	987.4	302.3	2797.4	166.6
August	679.0	20.0	0	0	113.3	7068.3	966.6
September	679.0	15.0	0	0	314.7	5353.3	3350.0
October	679.0	15.0	0	0	2458.1	2614.2	3300.0
November	29.0	0	0	0	1554.5	41.7	800.0
December	0	142.0	127.8	0	932.7	1462.3	165.6
Total	4753.0	1197.2	484.2	2052.6	7169.0	26268.0	10077.7
Per acre	4.75	11.97	0.48	20.52	7.17	26.27	10.08

TABLE 9 (Continued)

Month	Lettuce	Milo	Olives	Onions	Oranges	Peas (bush)	Peas (pole)	Plums
	100 A.	1000 A.	100 acres					
January	104.5	0	0	60.0	140.0	82.0	75.0	331.5
February	125.4	0	200.0	63.3	135.9	0	75.0	3.1
March	1388.7	0	200.0	66.7	20.2	0	7.1	23.7
April	1378.7	36.0	7.7	144.6	76.2	0	0	700.0
May	0	119.8	29.1	942.5	12.5	7.1	0	12.6
June	0	25.0	21.4	115.0	0	0	6.3	1162.3
July	0	88.7	38.0	0	45.7	24.8	20.0	3959.3
August	0	58.8	21.4	0	45.7	64.5	450.1	12.6
September	0	58.8	21.4	10.0	25.8	66.2	535.1	0
October	19.3	0	924.7	0	25.8	89.0	1508.3	0
November	4.1	365.0	624.7	315.9	698.6	335.0	1655.3	0
December	58.7	185.0	0	315.9	808.6	335.0	765.8	331.5
Total	3079.4	937.1	2088.4	2033.9	2035.0	1003.6	5098.0	2973.6
Per acre	30.79	0.94	20.88	20.34	20.35	10.04	50.98	29.74

TABLE 9 (Continued)

Month	Potatoes	Sugar Beets	Sweet potatoes	Watermelons	Wheat
	1,000 acres		100 acres		1,000 acres
January	933.3	97.9	25.0	0	0
February	85.0	31.2	41.0	74.8	0
March	266.8	840.8	146.7	75.6	0
April	310.9	803.2	117.6	290.3	0
May	2132.2	803.2	47.6	202.6	0
June	3875.9	803.2	47.6	88.9	0
July	1821.3	536.6	221.9	196.3	58.0
August	0	1783.3	368.8	0	58.0
September	0	1783.3	174.4	0	58.0
October	0	61.1	174.4	0	60.0
November	0	90.5	87.2	0	10.0
December	0	90.5	87.2	0	0
Total	9425.4	7728.8	1539.4	928 .5	244.0
Per acre	9.40	7.73	15.39	9.28	0.24

Kern County's Available Labor Supply.-- The total available labor supply for Kern County's agricultural operations is a composite figure made up of (a) operators and their families; (b) regularly employed workers hired on a monthly and more or less permanent basis; (c) transient workers; (d) local residents of the county available for but not regularly employed in agriculture; and (e) high school and junior college students during vacations.

In order to compare actual employment with available labor, data were assembled from various sources including the United States census of farms in crops regularly employed workers as determined by this study; resident farm workers other than those regularly employed as determined from files of the State Relief Administration, Works Progress Administration, California Employment Bureau; data of transient labor from various sources including the Kern County Department of Public Health, California Employment Bureau, Farm Security Administration, labor camps, labor contractors, growers, and packers; and students, from the County Board of Education. When figuring transient labor only workers who habitually "follow the crops" were included. Recent arrivals planning to make their homes in the county were classed as resident farm workers (unemployed).

The 1935 Census reports about 1,800 operators of crop farms.

The employment of regular workers according to the findings of this study approximate 2,500 during January, February and March; 3,000 in April; and 4,000 for May to December, inclusive.

The resident workers available for farm tasks approximate 14,800 mature workers (on the basis of two employable workers per family). 12/

The number of transient workers varies from month to month. During January, February and March the number is about 500; during April through September about 750; and during October about 2,500; and in November and December about 1,700.

Students are estimated as available to the number of 9,000 in June, July, August and early part of September.

The potential supply of labor which could be but is not fully utilized and the extent of employment are of particular significance in connection with this study. Table 10 indicates man-days of seasonal labor performed on behalf of 20 Kern County crops. For comparison the potential supply (ignoring questions of capability and assuming all suited to some kind of farm work) is calculated in terms of man-days. 13/ Table 10 indicates (a) total man-days of potential and more or less unemployed labor supply available during 1939 for farm work in Kern County, (b) actual employment given (1) in man-days and (2) in percent of available labor.

12/ It is possible that a figure of two employable members in agriculture is high but this is the figure as determined by local agencies in touch with this group. For some tasks the number available would be higher; for other tasks, lower.

13/ Based on days available for field work thus: January, 22; February, 24; March and April, 25 each; May - September, inclusive, 26: October and November, 25 each; December, 24.

TABLE 10

Potential Supply of Not Fully Utilized Labor and Extent of Agricultural Employment, Kern County, 1939

Month	Potential supply (man-days)	Extent of Employment (man-days)	Percentage of employment in terms of supply
January	336,600	36,110	10.8
February	367,200	18,592	5.0
March	382,000	31,748	8.3
April	388,750	38,641	9.9
May	404,300	73,426	18.2
June	638,300	85,050	13.3
July	638,300	46,384	7.2
August	638,300	63,683	10.0
September	560,300	63,175	11.3
October	432,500	155,612	36.0
November	412,500	108,646	26.4
December	396,000	87,625	22.2
Totals and average	5,595,055	808,692	14.5

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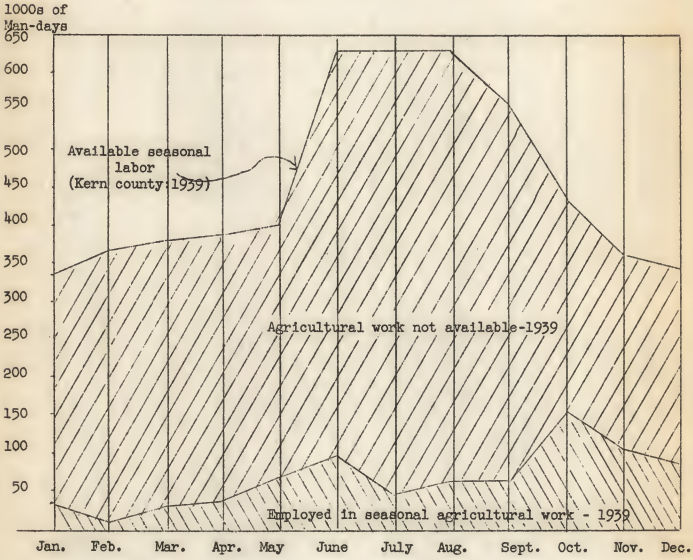
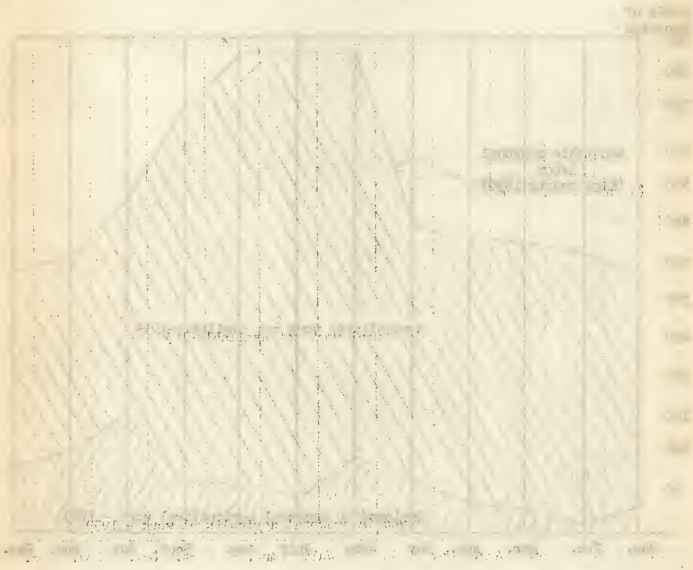
Figure 4.

Available Agricultural Labor versus Agricultural Employment:
Kern County: 1939.





The data set forth in tables 5, 10 and figure 4 show that employment falls far short of the potential labor supply. From the standpoint of available labor, Kern County has a marked excess of man power -- again ignoring the question of whether or not the potential supply contains workers who will and are able to perform the multiplicity of tasks involved in producing the long list of crops comprising Kern County's agriculture. Using monthly averages as an illustration, the percentage of employment of seasonal workers is but 14.5 per cent of the average potential supply. This means seven workers for each available job. These percentages, however, vary from month to month (as set forth in table 10). If all labor be considered -- operator and regularly employed workers in addition to the listing shown here -- the average monthly percentage rises. Kern County growers do employ considerable resident labor, especially men employed on a monthly basis, and in addition a large proportion of the seasonal work is given to local residents. The data indicate that 67 per cent are classed as local resident, 33 per cent as transient. 14/ Growers' past experience with transients known to them results in these workers being given preference. Many growers stoutly maintain that the transient worker possesses some definite advantages over local labor. These workers possess long years of experience working with California crops and under California conditions. Many, if not most, of these experienced workers follow a definite cycle, coming to the same farm year after year. The group is mobile, coming and going as work starts and concludes.

These figures of available help (other than operators and regularly employed workers) and the extent of employment are graphically presented in figure 1.

It is a huge problem and one that, if solved in Kern County, will set a pace for many other California localities facing a situation of an over-supply of workers or an under-supply of available work; but whichever way one puts it the net result is the same: Difficulties and disappointment for the unemployed; a community responsibility of no small order; a test of government ability to help. Eventually newcomers may become integrated, but for the present agriculture of itself cannot nor should it be expected to solve the problem for the State as a whole, nor even specifically for Kern County. The solution may rest in part with agriculture but in all fairness other industries and agencies must "put their shoulders to the wheel" and cooperate in a search for a way out.

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14/ See table 7.